

REMARKS

This Amendment is submitted in response to the Examiner's Action mailed September 9, 2004, with a shortened statutory period of three months set to expire December 9, 2004. Claims 1-13 are currently pending. With this amendment, claims 1 and 7 have been amended. Claims 14-27 have been canceled.

Applicants have amended the claims to describe an enclosure for limiting condensation in the enclosure by limiting air movement near the integrated circuit. The enclosure substantially encloses the integrated circuit, the cold plate, and the heater. A dry gas is injected into the enclosure. The dry gas maintains a particular relative humidity in the enclosure to prevent condensation on surfaces within the enclosure. One example of support for this amendment can be found in the specification on page 4, line 19, through page 5, line 2.

The Examiner rejected claims 1, 3-5, and 7-9 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication 2002/0145439 published by *Gaasch*. This rejection, as it might be applied to the claims as amended, is respectfully traversed.

Applicants have amended claims 1 and 7 to include the features of an enclosure that encloses the integrated circuit, the cold plate, and the heater. A dry gas is injected into the enclosure and maintains a particular relative humidity in the enclosure to prevent condensation on the surfaces within the enclosure. Thus, the enclosure limits condensation in the enclosure by limiting air movement near the integrated circuit.

Gaasch describes a temperature control device that includes a device under test 102 that is held against a heating/cooling assembly 104. A heating/cooling assembly 200 includes a heater assembly 206 and a heat sink 204. *Gaasch* does not describe an enclosure that encloses the device under test, the heat sink, and the heater. *Gaasch* does not discuss condensation or relative humidity. *Gaasch* does not describe an enclosure for limiting condensation in the enclosure by limiting air movement near the integrated circuit. *Gaasch* does not describe a dry gas that is injected into an enclosure where the dry gas maintains a particular relative humidity in the enclosure to prevent condensation on surfaces within the enclosure.

Gaasch does not describe, teach, or suggest the features of Applicants' claims. Further, *Gaasch* does describe, teach, or suggest the problem of condensation during the testing of an integrated circuit. Therefore, *Gaasch* provides no motivation to combine *Gaasch* with another reference to prevent condensation on surfaces inside an enclosure that substantially encloses an integrated circuit, a cold plate and a heater.

The Examiner rejected claims 2 and 10 under 35 U.S.C. § 103(a) as being unpatentable over *Gaasch* in view of U.S. Patent 5,692,556 issued to *Hafner*. This rejection, as it might be applied to the claims as amended, is respectfully traversed.

Claims 2 and 10 describe the temperature control of the integrated circuit being accomplished on a coarse level by adjusting fluid temperature and/or fluid flow rate and a fine level by altering the output of the heater.

The Examiner states that *Gaasch* does not teach these features and relies on *Hafner* to supply these missing features. *Hafner* teaches a precision temperature test chamber. *Hafner* does not describe, teach, or suggest the problem of condensation during the testing of an integrated circuit. *Hafner* does not describe, teach, or suggest the features of Applicants' claims including prevent condensation on surfaces inside an enclosure that substantially encloses an integrated circuit, a cold plate and a heater.

The combination of *Gaasch* and *Hafner* does not describe, teach, or suggest the combination of an enclosure for limiting condensation in the enclosure by limiting air movement near the integrated circuit where the enclosure substantially encloses the integrated circuit, the cold plate, and the heater, and including a dry gas that is injected into the enclosure where the dry gas maintains a particular relative humidity in the enclosure to prevent condensation on surfaces within the enclosure, and the temperature control of the integrated circuit being accomplished on a coarse level by adjusting fluid temperature and/or fluid flow rate and a fine level by altering the output of the heater. Therefore, the combination of *Gaasch* and *Hafner* does not render Applicants' claims unpatentable.

The Examiner rejected claims 6 and 13 under 35 U.S.C. § 103(a) as being unpatentable over *Gaasch* in view of U.S. Patent 6,257,319 issued to *Kainuma*. This rejection, as it might be applied to the claims as amended, is respectfully traversed.

Claims 6 and 13 describe the cold plate being connected to the source of chilled fluid by pipes, the pipes being covered with insulation such that condensation does not form on the pipes.

The Examiner states that *Gaasch* does not disclose chilled fluid pipes being covered with insulation such that condensation does not form on the pipes and relies on *Kainuma* to supply these missing features. *Kainuma* teaches a heat insulation member that prevents condensation due to cold air. *Kainuma* does not describe, teach, or suggest the features of Applicants' claims including prevent condensation on surfaces inside an enclosure that substantially encloses an integrated circuit, a cold plate and a heater.

The combination of *Gaasch* and *Kainuma* would reduce condensation by wrapping various devices in insulation. This is not what is claimed by Applicants in claims 1 and 7. Applicants claim an enclosure for limiting condensation in the enclosure by limiting air movement, not by wrapping surfaces in an insulation member. Claims 6 and 13 add to these features the feature of insulating pipes. Thus, according to Applicants claims there is an enclosure for limiting condensation in the enclosure by limiting air movement as well as pipes being covered with insulation such that condensation does not form on the pipes. *Kainuma* teaches only that pipes can be insulated. *Kainuma* does not teach an enclosure for limiting condensation in the enclosure by limiting air movement.

The combination of *Gaasch* and *Kainuma* does not teach the combination of an enclosure for limiting condensation in the enclosure by limiting air movement near the integrated circuit where the enclosure substantially encloses the integrated circuit, the cold plate, and the heater, and including a dry gas that is injected into the enclosure where the dry gas maintains a particular relative humidity in the enclosure to prevent condensation on surfaces within the enclosure, and pipes that are the source of the chilled fluid being covered with insulation. Therefore, the combination of *Gaasch* and *Kainuma* does not render Applicants' claims unpatentable.

The cited references do not render Applicants' claims unpatentable. None of the references, either singly or in combination, describe, teach or suggest an enclosure for limiting condensation in the enclosure by limiting air movement near the integrated circuit where the enclosure substantially encloses the integrated circuit, the cold plate,

and the heater, and a dry gas that is injected into the enclosure where the dry gas maintains a particular relative humidity in the enclosure to prevent condensation on surfaces within the enclosure. Because the cited references do not describe, teach, or suggest the features of Applicants' independent claims, the cited references do not describe, teach, or suggest the features of the dependent claims and their base independent claim.

All claims are believed to be in an allowable form. The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

DATE: 12/9/04

Respectfully submitted,

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